PROJECT NUMBER: 0400
PROJECT TITLE: Low Density Rod Development
PROJECT LEADER: R. S. Mullins
PERIOD COVERED: October 1988

LOW DENSITY ROD

A. Objective: Develop a continuous process for the production of reduced density cigarettes.

B. Results: Analytical results from the aftercut application/tracking study indicated that approximately one third of the anethole was lost during subsequent processing when the aftercut was applied to the all-lamina blend in the small scale primary either before or after the binder. When the aftercut was applied before the binder, most of the loss occurred during binder application, with no loss detected during cigarette making. When the aftercut was applied after the binder, the loss occurred during filler storage and cigarette making. When the aftercut was applied with the binder, only trace levels of anethole could be detected in either the filler or the cigarettes. Subjective evaluation of the samples is in progress but is being slowed by the ART program. A follow-up test is in progress to confirm the losses using Marlboro filler with the aftercut applied in the large scale primary.

A series of low density cigarette models has been produced for a test to determine if reduced cigarette density allows a significant reduction in dilution, at constant delivery, puff count, and RTD. Analytical testing of the samples will begin following packing of the cigarettes during the second week of November.

Production plans for the second set of samples for Project Tomorrow have been finalized. Binder will be applied to 20 cpi Marlboro without aftercut in the continuous coating cylinder. Following binder application, aftercut will be applied to the filler in the Semiworks, at an increased rate to account for losses during cigarette making. Untipped, 63 mm cigarette rods will be produced and, after weight selection, tipped and packed in the Semiworks. Following analytical testing and subjective screening by an expert panel, the cigarettes will be subjectively evaluated by the M/C panel.

Firmness and loose ends results from the circumference variation study provided no indication of increased bond or filler breakage at reduced circumferences. Analysis of data from the tipper degradation test is underway.

A test to determine if rejected bound cigarettes can be recovered using the standard ripping process was conducted at Stockton Street. No problems were encountered in ripping the bound cigarettes and no unusual build-up of material in the equipment was noticed during the test. Samples collected throughout the run are being tested by Stockton Street QA personnel. During production of the 550,000 low density cigarettes needed for this test, no significant problems were encountered in operating the cigarette maker at speeds as high as 1800 cpm.

2022221511

Source: https://www.industrydocuments.ucsf.edu/docs/sjkm0000

C. **Plans**: Produce cigarette samples for Project Tomorrow in a Marlboro configuration. Complete packing and testing of the cigarettes produced for the dilution reduction study. Evaluate the results from the circumference variation and tipper tests. Evaluate the results of the test conducted to determine if rejected low density cigarettes can be recovered using the standard factory ripper process. Evaluate moisture application to the filler in the chimney using an ultrasonic nozzle.

2022221512

Source: https://www.industrydocuments.ucsf.edu/docs/sjkm0000